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# (12) United States Patent

Mazuir et al.

# (54) EXTERIOR LIGHTING AND WARNING SYSTEM

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This patent is subject to a terminal disclaimer.

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### Related U.S. Application Data

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#### (57) ABSTRACT

A vehicle may have vehicle controls that are used in steering, braking, and accelerating the vehicle. The vehicle may have sensors that gather information on vehicle speed, orientation, and position. The sensors may also gather information on relative speed between the vehicle and a following vehicle, information on risks of a collision between a vehicle and an external object, and other vehicle status information and vehicle operating environment information. Control circuitry may use light-based devices to display braking information, information on vehicle speed, the relative speed between a vehicle and a following vehicle, autonomous driving mode status information, custom brake light information or other user-selected information, or other information on vehicle status and the operating environment of a vehicle.

### 20 Claims, 10 Drawing Sheets

